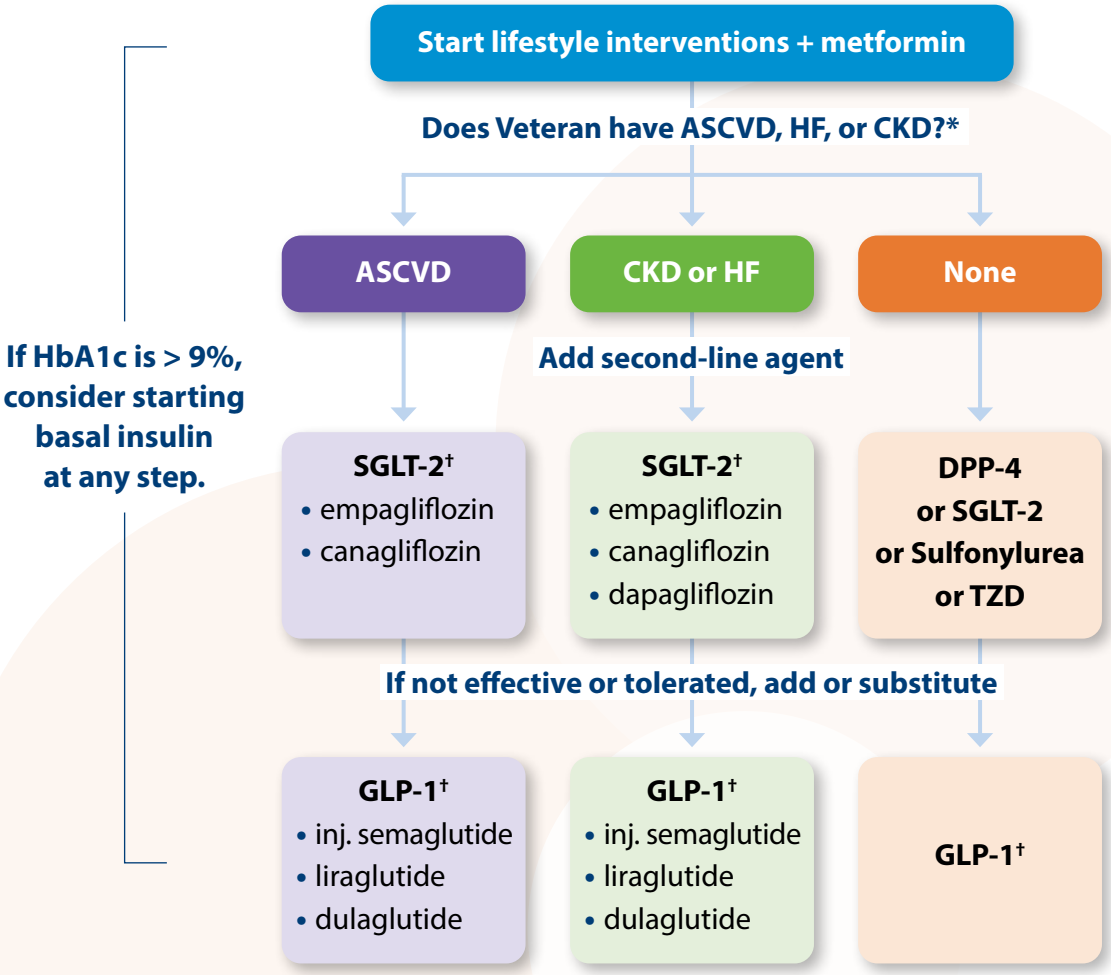
U.S. Department of Veterans Affairs
Veterans Health Administration
PBM Academic Detailing Service

Provider Factsheet

Cost Effective Therapies for Type 2 Diabetes

Meal planning and exercise should be primary elements of lifestyle interventions that are the cornerstone of every treatment plan.[1]



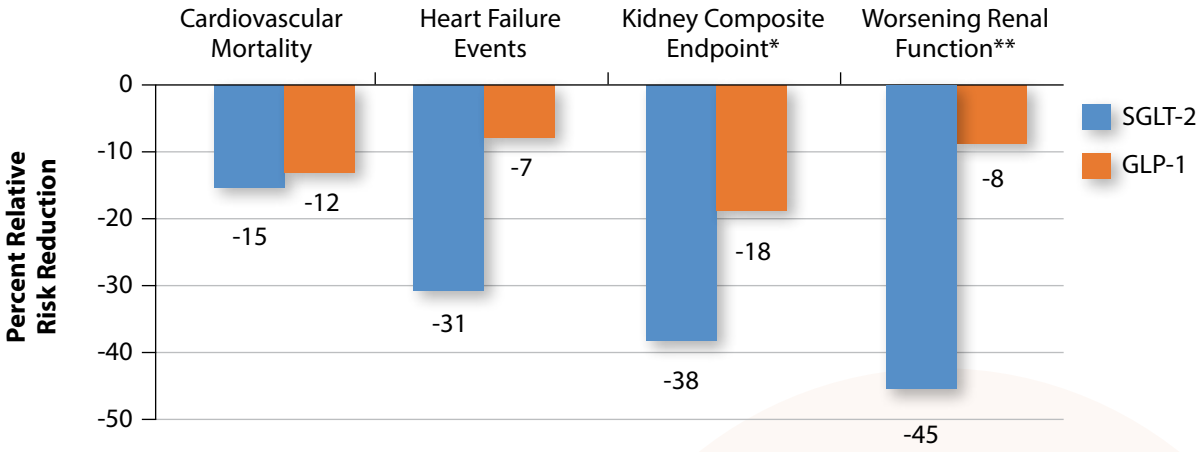
ASCVD: indicators are age ≥55 years with coronary, carotid, or lower extremity artery stenosis >50% or LVH.
CKD: eGFR 30-60 mL/min/1.73m^2 or UACR >30 mg/g, particularly UACR > 300 mg/g. **HF:** left ventricular ejection fraction <45%.
*Agents shown to reduce ASCVD risk: SGLT-2 = Sodium-glucose co-transporter 2 inhibitor (empagliflozin, canagliflozin); GLP-1 = Glucagon-like peptide-1 agonist (inj. semaglutide, liraglutide, dulaglutide). GLP-1s have not been shown to lower heart failure risk (neutral outcome). Dapagliflozin has been shown to lower heart failure risk and CKD risk, but neutral for ASCVD.
†Indicates referral to individual Criteria for Use. Do not combine a DPP-4 inhibitor with a GLP-1 agonist.
ASCVD = atherosclerotic cardiovascular disease; CKD = chronic kidney disease; HF = heart failure.

In patients with cardiovascular disease, SGLT-2 inhibitors and GLP-1 agonists prevent cardiovascular events and reduce cardiovascular mortality. In addition, SGLT-2 inhibitors significantly reduce heart failure events in patients with reduced ejection fraction. Renal function declines slower when using SGLT-2 inhibitors and GLP-1 agonists with possibly a greater effect using SGLT-2 inhibitors.[2]

Did You Know?

The cardiovascular and renal benefits of these agents are independent of their glucose-lowering effects.

Cardiac and Renal Benefits of SGLT-2 Inhibitors & GLP-1 Agonists[2]



*Kidney composite endpoint includes new-onset macroalbuminuria, sustained doubling of serum creatinine, or a 40% decline in estimated glomerular filtration rate (eGFR), end-stage kidney disease, or renal death. **Worsening renal function includes worsening eGFR, end-stage kidney disease, or renal death. The beneficial effect of GLP-1 may be mostly from reducing macroalbuminuria.

Cost Considerations*

Drug Classes	$	$$	$$$	$$$$	$$$$$
Sulfonylurea	**Glipizide (Glucotrol®)** **Glimepiride (Amaryl®)**				
Biguanide	**Metformin (Glucophage®)**				
TZD	**Pioglitazone (Actos®)**		Rosiglitazone (Avandia®)		
DPP-4 Inhibitors		**Alogliptin (Nesina®)**			Linagliptin (Tradjenta®) Saxagliptin (Onglyza®) Sitagliptin (Januvia®)
SGLT-2 Inhibitors			**Empagliflozin (Jardiance®)**		Canagliflozin (Invokana®) Dapagliflozin (Farxiga®) Ertugliflozin (Steglatro®)
GLP-1 Agonists				**Semaglutide inj. (Ozempic®)**	**Liraglutide (Victoza®)** Dulaglutide (Trulicity®) Exenatide XR (Bydureon®) Lixisenatide (Adlyxin®) Exenatide (Byetta®) Semaglutide oral (Rybelsus®)

Note: VA Formulary medications are bolded. Cost Symbols: $ = < $10; $$ = $10-49.99; $$$ = $50-99.99; $$$$ = $100-199.99; $$$$$ = ≥ $200. Cost is for a 30-days supply. *VA contracts for specific formulations of a particular drug should be followed.

REFERENCES

1. American Diabetes Association. Standards of medical care in diabetes - 2020. *Diabetes Care.* 2020;43(Suppl 1):S1-S207. **2.** Zelniker TA, Wiviott SD, Raz I, et.al. Comparison of the Effects of Glucagon-Like Peptide Receptor Agonists and Sodium-Glucose Cotransporter 2 Inhibitors for Prevention of Major Adverse Cardiovascular and Renal Outcomes in Type 2 Diabetes Mellitus Systematic Review and Meta-Analysis of Cardiovascular Outcomes Trials. *Circulation.* 2019;139:2022–2031. https://doi.org/10.1161/CIRCULATIONAHA.118.038868.

This factsheet was created to be used as a tool for VA providers and is available to use from the
VA PBM Academic Detailing Service SharePoint Site: https://dvagov.sharepoint.com/sites/vhaacademicdetailing/SitePages/Home.aspx